

OP-171

Endovascular Therapy of Acute Ischemic Stroke by Interventional Cardiologists: National Initial Experience

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Aim: We reported our initial experience with thrombectomy devices in patients with acute ischemic stroke.

Methods: Demographic, clinical, and angiographical findings of nineteen consecutive patients (mean age 61.4±12.5 years; 7 females and 12 males) with acute ischemic stroke were evaluated retrospectively.

Results: The mean initial National Institutes of Health Stroke Scale (NIHSS) score was 19.5±5.6. Middle cerebral artery was the occluded artery in all of the patients (proximal occlusion in eleven, distal in eight and tandem occlusions in seven patients). Successful revascularization achieved in 16 patients (84%). The mean NIHSS score was 8.4±8.2 at 24 hours after the procedure, and 60% of patients showed a modified Rankin scale score of ≤2 at 90 days. New occlusion by migrated emboli was observed in two (11%) cases. No patients experienced post-procedural symptomatic intracerebral hemorrhage and three patients died during three months follow up. In all patients thrombectomy was performed with retrievable Solitaire AB stent system.

Conclusion: This single center experience with mechanical thrombectomy devices demonstrated that it could be performed with high success rates by experienced interventional cardiologists in accoutered cath labs all over the country.

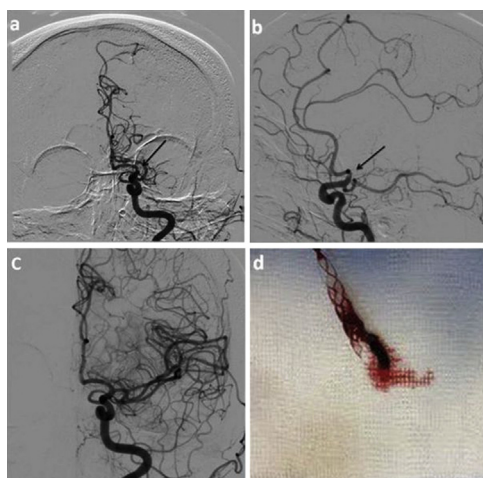


Table 1. The clinical and post-procedural angiographical characteristics of the patients.

Patients	Age/Gender	NIHSS on presentation	NIHSS on discharge	mRS on presentation	mRS on 3 months	Artery site occluded	Recanalization time	No of devices passes	TICI postprocedure
1	60/M	25	5	5	1	LMCA	180	3	3
2	60/F	25	3	4	1	LMCA	360	1	3
3	69/M	25	23	5	-	LMCA+ICA (Tandem)	-	5	0
4	55/F	8	0	1	0	LMCA	150	1	3
5	88/F	20	17	4	3	LMCA	150	1	3
6	45/M	23	7	4	3	RMCA+ICA (Tandem)	360	1	3
7	53/M	24	3	4	1	LMCA	180	1	3
8	65/M	20	11	4	3	LMCA+ICA (Tandem)	300	4	2b
9	67/M	8	2	2	0	LMCA+ICA (Tandem)	180	3	3
10	65/M	24	23	5	3	RMCA	180	3	3
11	70/F	14	1	4	1	LMCA	360	1	3
12	67/F	12	3	1	1	LMCA	240	1	3
13	71/M	23	18	4	-	LMCA	-	5	1
14	25/F	20	4	4	2	RMCA	150	5	2b
15	58/F	24	0	5	0	RMCA+ICA (Tandem)	240	1	3
16	57/M	24	23	5	-	LMCA+ICA (Tandem)	310	4	1
17	59/M	14	4	4	0	LMCA	260	1	3
18	64/M	19	8	4	1	LMCA	280	2	3
19	69/M	22	5	4	1	LMCA	180	3	3

NIHSS = National Institutes of Health Stroke Scale, TICI = thrombolysis in cerebral infarction, mRS = modified Rankin Scale, ICA = internal carotid artery, MCA = middle cerebral artery

OP-172

Comparison of Anti- Embolic Protection with Proximal Balloon Occlusion and Filter Devices During Carotid Artery Stenting: Clinical and Procedural Outcomes

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Objectives: The aim of this study was to compare the periprocedural and clinical outcomes after carotid artery stenting (CAS) with proximal protection devices versus with distal protection devices.

Methods: Patients with internal carotid artery (ICA) stenosis undergoing CAS with cerebral embolic protection were randomly assigned to proximal balloon occlusion or distal filter protection. Adverse events were defined as death, major stroke, minor stroke, transient ischemic attack (TIA) and myocardial infarction (MI). Periprocedural and 30 days adverse events and ICA vasospasm rates were compared between the two embolic protection groups.

Results: 88 consecutive patients were randomized; 48 patients with proximal protection (mean age 68.8±13.6, 66% male) and 40 patients with distal protection device (mean age 65.4±12.3, 70% male). There was no significant difference in periprocedural and 30 days adverse event rates between the two groups (p>0.05). However, the incidence of periprocedural ICA vasospasm (23%) in distal filter protection group was higher (p=0.019) than the observed incidence (2%) in proximal balloon occlusion group.

Conclusion: There was no difference between the clinical periprocedural and 30 days adverse event rates of distal filter and proximal balloon protection systems. However, distal filter protection systems revealed higher incidences of periprocedural ICA vasospasm.